

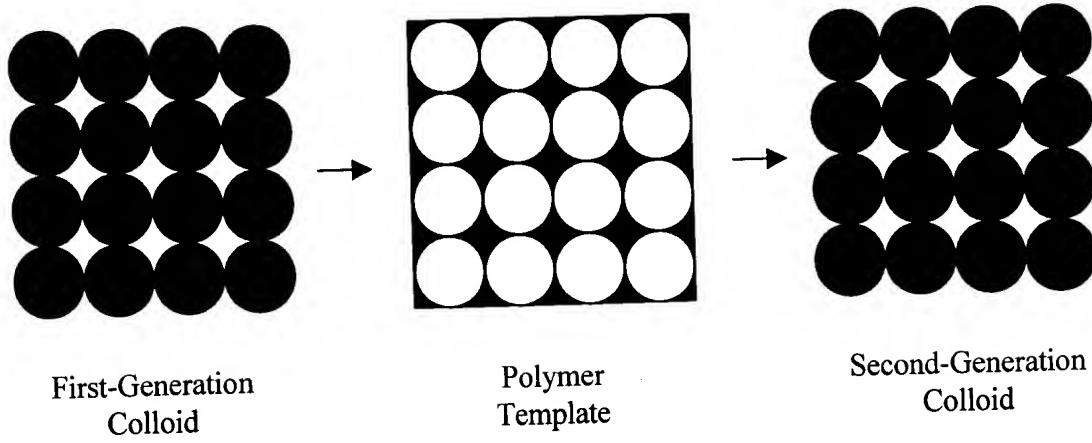
## REMARKS

Applicants respectfully acknowledge receipt of the Office Action mailed May 29, 2003 and the supplemental office action dated June 9, 2003. In those Office Actions, the Examiner (1) rejected Claims 10, 11, 20 and 44 under 35 U.S.C. §§ 102(a) and 103(a); (2) withdrew Claims 12 – 15, 18 and 19 as drawn to a non-elected species; (3) objected to Claims 16, 17 and 21; and (4) allowed Claims 30 - 42. In response, applicants have (as recommended by the Examiner) amended Claims 16, 17 and 21 so that they no longer depend from a rejected claim. In addition, applicants respectfully traverse the Examiner's rejections and request reconsideration.

The Examiner rejected product-by-process Claims 10 and 11 under 35 U.S.C. §§ 102(a) and 103(a) based upon United States Patent No. 6,139,626 ("Norris et al."). In making this rejection, the Examiner acknowledged that the process disclosed in Norris et al. was different than the process in the present application. However, the Examiner cited *In re Marosi*, 710 F.2d 799 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985) for the proposition that a product claimed in a product-by-process claim may be anticipated by, or obvious in view of, a prior art product made by a different method. While applicants do not dispute the Examiner's statement of the law, the Examiner's analysis appears predicated on a belief that the product disclosed in Norris et al. is a "spherical CdSe colloid" and is the same as or obvious from the claimed product in the present application. Applicants respectfully assert that the product disclosed in Norris et al. is neither spherical nor even similar to the presently claimed product.

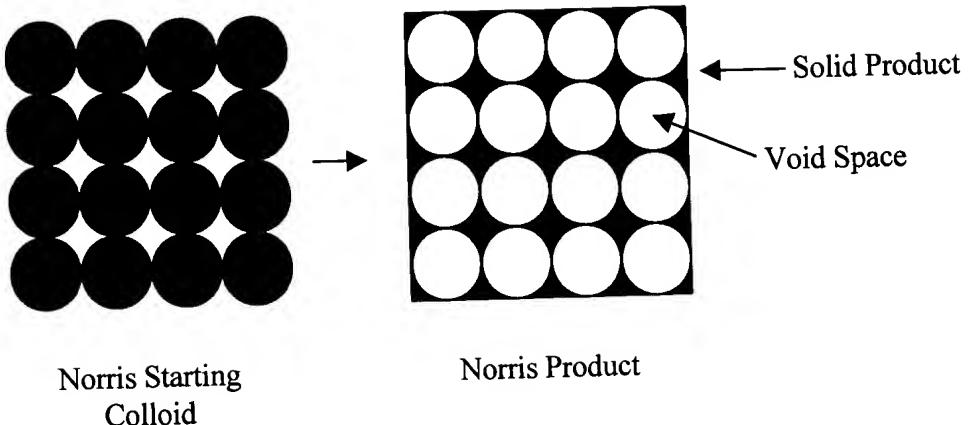
The claims at issue in the present application recite "second generation colloids," which are colloids "whose morphology is patterned on the morphology of the first-generation colloidal template." To obtain a second-generation colloid whose morphology mimics that of a first-generation colloid, applicants devised a novel technique. First, a polymer template is prepared

around a first-generation colloid. Thus, the morphology of the polymer template is inversely related to – or a “negative” of – the first-generation colloid. The second-generation colloid is then prepared by using the polymer template as a mold. Thus, the second-generation colloid is a “positive” image of the first-generation colloid. A two-dimensional example, which is included for explanatory reasons and is not meant to limit the claimed invention in any way, is depicted graphically below in Figure 1.



**FIGURE 1.**

In contrast to the present invention, Norris et al. is directed to making a “negative” or inverse of the first-generation colloid. This is true because the product in Norris et al. is prepared by infiltrating nanocrystals into the pores of a spherical colloid and then, optionally, removing the spherical colloid to yield the nanocrystal product. This resulting product, depicted in Figure 2 below, is actually a “negative” of the first-generation spherical colloid (*i.e.*, its void space is shaped as a spherical colloid).



**FIGURE 2.**

This is also clear from Figures 6A and 6B in the Norris et al. reference. Figures 6A and 6B depict the CdSe product in Norris et al. As can be seen from those figures, the product in Norris et al. is the “negative” or inverse of a spherical colloid. Stated slightly differently, the final product in Norris et al. has a shape roughly analogous to the intermediate polymer mold in the present invention (see Figure 1 in the present response). Because Norris et al. does not teach the same product as claimed in the present application, Norris et al. cannot anticipate the present claims under 35 U.S.C. § 102(a).

The Examiner also rejected Claims 10 and 11 as obvious in view of Norris et al. In rejecting patent claims under 35 U.S.C. § 103, the patent examiner bears the initial burden of supporting a *prima facie* case of obviousness. *See* MANUAL OF PATENT EXAMINING PROCEDURE (hereinafter “MPEP”) § 2142 (7th ed. 1998); *see also* *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). To meet this burden, the examiner must satisfy three separate criteria. First, a suggestion or motivation to combine the relevant references or to modify a single reference must exist either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *See* MPEP § 2143.01; *see also* *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Second, there must be a reasonable expectation of success. *See* MPEP § 2143.02; *see also* *In re Merck & Co.*,

*Inc.*, 800 F.2d 1091 (Fed. Cir. 1986). Finally, the prior art references must, when combined, teach or suggest all claim limitations. *See* MPEP § 2143.03; *see also* *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974). If the examiner fails to satisfy the *prima facie* case of obviousness, the applicant is under no obligation to submit evidence of nonobviousness. *See* MPEP § 2142. Norris et al. neither teaches a method or product that is the “positive” image of the original colloid nor suggests any manner by which such a product might be achieved. Consequently, such a product cannot be obvious under section 103 in view of Norris et al.

The Examiner also rejected Claims 20 and 44. Claim 20 depends from Claim 11. In view of applicants’ argument that generic Claim 11 is neither anticipated by nor obvious in view of Norris et al., applicants respectfully request that Claim 20 is suitable for allowance. *See In re Baker Hughes, Inc.*, 215 F.3d 1297, 1303 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988). Applicants also assert that Claim 44 is novel and non-obvious in view of Norris et al. for the same reasons as Claims 10 and 11.

Non-elected Claims 12 – 15, 18 and 19 were withdrawn by the Examiner in view of his rejection of generic Claim 11. In view of applicants’ argument that generic Claim 11 is neither anticipated by nor obvious in view of Norris et al., applicants request that Claims 12 – 15, 18 and 19 be reinstated pursuant to MPEP § 809.02(c).

For all of these reasons, applicants respectfully request allowance of Claims 10 – 21 and 44.

**Conclusion**

Applicants believe that they have fully responded to the Office Action. If the Examiner has any questions or comments, or otherwise feels it would be advantageous, he is encouraged to telephone the undersigned at (713) 238-8043.

Respectfully submitted,



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